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(54) **PROCESS FOR PRODUCTION OF ETHYLENE AND PROPYLENE BY CATALYTIC PYROLYSIS OF HEAVY HYDROCARBONS**

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(58) **Field of Search** 585/648, 650, 585/651, 652, 653; 208/118, 114, 120.01, 120.25

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(57) **ABSTRACT**

A catalytic pyrolysis process for production of ethylene and propylene from heavy hydrocarbons, comprises that heavy hydrocarbons are contacted with a pillared interlayered clay molecular sieve and/or phosphorus and aluminum or magnesium or calcium modified high silica zeolite having a structure of pentasil contained catalysts in a riser or down-flow transfer line reactor in the presence of steam and catalytically pyrolysed at a temperature of 650° C. to 750° C. and a pressure of 0.15 to 0.4 MPa for a contact time of 0.2 to 5 seconds, a weight ratio of catalyst to feedstock of 15:1 to 40:1 and a weight ratio of steam to feedstock of 0.3:1 to 1:1. The yields of ethylene and propylene by the present invention are over 18 wt %.

14 Claims, No Drawings